

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A prosthetic joint for replacement of a natural joint to resist dislocation, the prosthetic joint comprising:

a liner sized to fit and replace a portion of an acetabulum including an internal concave portion defining an internal concave diameter, and defining an opening having a passage width smaller than said internal concave diameter;

a ball portion sized to fit and replace a portion of a femoral head having a ball diameter substantially equal to said internal concave diameter; and

a constraining ring cooperating with said opening;

wherein said ball portion includes ~~[[an]]~~ a cylindrical equator extending around a complete circumference of said ball portion and having an equator diameter similar to said passage width and smaller than said ball diameter;

wherein said ball portion is adapted to be implanted into said internal concave portion during an operative procedure.

2. (Currently Amended) The prosthetic joint of claim 1, further comprising:
a cup having an interior surface and an exterior surface and a fixation member extending from said exterior surface adapted to be implanted into a first boney structure;
and
a stem adapted to be implanted into a second boney structure;
wherein said ball portion is a femoral head prosthesis and is adapted to extend from said stem;
wherein said liner is affixed to said cup such that said ball portion is able to articulate within said internal concave portion.

3. (Currently Amended) The prosthetic joint of claim 2, wherein said cylindrical equator of said ball portion ~~further defines a cylindrical equator having a~~ cylinder diameter to allow said ball portion to be inserted into said internal concave portion through the opening when a central axis of said cylindrical equator is aligned with the opening.

4. (Original) The prosthetic joint of claim 3, wherein said cylinder diameter is alignable with said opening in only one insertable orientation, said insertable orientation includes an unnatural orientation of said second boney portion relative to said first boney portion.

5. (Currently Amended) The prosthetic joint of claim 4, wherein said insertable orientation substantially aligns [[an]] the central axis of said cylindrical equator and a liner passage central axis of said liner.

6. (Original) The prosthetic joint of claim 2, wherein said ball portion and said stem are substantially modular and operably interconnect for use.

7. (Original) The prosthetic of claim 3, wherein said ball portion generally defines a sphere including an equator and a sphere diameter, wherein said cylinder diameter is formed at said equator such that having a diameter smaller than said sphere diameter.

8. (Original) The prosthetic joint of claim 2, wherein said ball portion is resistant to dislocation from said internal concave portion through interaction of said ball portion with said opening of said liner.

9. (Original) The prosthetic joint of claim 3, wherein said cylindrical equator is disposed at an angle relative to said stem.

10. (Original) The prosthetic joint of claim 1, wherein:

said constraining ring is assembled onto said liner prior to an operative procedure to implant said liner; and

said constraining ring resists a removal of said ball portion from said liner after implantation.

11. (Original) The prosthetic joint of claim 1, further comprising:

said liner is adapted to be fixed directly to a first boney structure; and

a modular stem adapted to be implanted into a second boney structure;

wherein said ball portion is a modular head and is adapted to extend from said modular stem;

wherein said ball portion is able to articulate within said internal concave portion.

12. (Original) The prosthetic joint of claim 1, wherein:

said constraining ring is assembled onto said liner during an operative procedure to implant said liner; and

said constraining ring resists a removal of said ball portion from said liner after implantation.

13. (Original) The prosthetic joint of claim 3, wherein said cylindrical diameter is operable to allow a flow of a fluid through said cup.

14. – 34. (Cancelled)

35. (Currently Amended) A prosthetic joint for replacement of a natural joint, the prosthetic joint comprising:

a first prosthesis member including an internal concave portion defining an internal concave diameter;

a second prosthesis member defining a bore about junction portion centered on and formed around a first axis having a selected diameter and defining at least one cylindrical portion having a central axis the same as the first axis about at least a portion of a selected equator of said second prosthesis member;

wherein said second prosthesis member is adapted to be implanted into said internal concave portion during an operative procedure;

wherein said cylindrical portion is operable to substantially ensure contact with less than the entire internal concave portion.

36. (Currently Amended) The prosthetic joint of claim 35, wherein said first prosthesis member defines an acetabular prosthesis and includes a liner operable to resist removal of said second prosthesis member from said internal concave portion after implantation therein.

37. (Currently Amended) The prosthetic joint of claim 35, wherein said second prosthesis member defines at least a portion of a sphere and said cylindrical portion is positioned at a selected equator of said sphere to define a cylindrical equator which extends around an entire circumference of said second prosthesis member and includes a radius less than a radius of said sphere to a point outside of said cylindrical portion.

38. (Previously Presented) The prosthetic joint of claim 35, wherein said cylindrical portion is operable to allow a selected fluid to flow into said internal concave portion after said second prosthesis member is positioned in said first member.

39. (Currently Amended) A prosthesis for replacement of an anatomical portion, comprising:

~~a first~~ an acetabular prosthesis member including an internal concave portion defining an internal concave diameter; and

a ~~second~~ femoral head prosthesis member defining a tapered junction ~~bore~~ about centered on and formed around a first axis, wherein said femoral head prosthesis member having has a first diameter substantially equal to said internal concave diameter and has a cylindrical equator that defines ~~defining at least a portion of an a complete~~ equator of said femoral head prosthesis member having a second diameter about the first axis less than said first diameter;

wherein said ~~second~~ femoral head prosthesis member is adapted to be implanted into said internal concave portion during an operative procedure;

wherein said equator substantially eliminates complete contact of said ~~second~~ femoral head prosthesis member with said ~~first~~ acetabular prosthesis member.

40. (Currently Amended) The ~~prosthetic~~ prosthesis of claim 39, wherein said ~~second~~ femoral head prosthesis member substantially defines a sphere and said equator is an equator of said sphere generally defining a cylindrical portion complete around a circumference of said femoral head prosthesis and including a selected height.

41. (Currently Amended) The ~~prosthetic~~ prosthesis of claim 40, wherein said ~~first~~ acetabular prosthesis member and said ~~second~~ femoral head member articulate relative to each other;

wherein said equator defined by said ~~second~~ femoral head member is operable to reduce wear by contacting said internal concave portions on a surface area less than a surface area of a surface of the sphere.

42. (Currently Amended) The prosthesis of claim 39, wherein said equator defined by said ~~second~~ femoral head prosthesis member allows a passage into said internal concave portion of said ~~first~~ acetabular prosthesis member after said ~~second~~ femoral head prosthesis member is implanted relative to said internal concave portion;

wherein a selected fluid may flow into said internal concave portion through said passage.

43. (Currently Amended) The prosthesis of claim 39, wherein a passage width of said ~~first~~ acetabular prosthesis member is substantially equivalent to said second prosthesis diameter of said ~~second~~ femoral head prosthesis member;

wherein said first diameter of said ~~second~~ femoral head prosthesis member is greater than said passage width of said ~~first~~ acetabular prosthesis member;

wherein said ~~second~~ femoral head prosthesis member is operable to be implanted into said ~~first~~ acetabular prosthesis member of a first orientation and constrained within said ~~first~~ acetabular prosthesis member in a second orientation.

44. (Currently Amended) The prosthesis of claim 40, wherein said ~~second~~ femoral head prosthesis member defines a transition from said cylindrical portion to reduce a wear on said ~~first~~ acetabular prosthesis member.

45. (Currently Amended) A prosthetic joint for replacement of a natural joint to resist dislocation, the prosthetic joint comprising:

a constrained liner assembly comprising:

a liner member sized to fit and replace a portion of an acetabulum defining an internal concave portion defining an internal concave diameter and defining an opening having a passage dimension smaller than said internal concave diameter;

a constraining ring cooperating with said opening to reinforce and maintain the passage dimension;

a ball portion sized to fit and replace a portion of a femoral head having a ball diameter substantially equal to said internal concave diameter; and

wherein said ball portion includes ~~an~~ a cylindrical equator having a diameter similar to said passage ~~width~~ dimension;

wherein said ball portion is adapted to be implanted into said internal concave portion during an operative procedure.

46. (Previously Presented) The prosthetic joint of Claim 45, wherein the constrained liner assembly is pre-assembled.

47. (Previously Presented) The prosthetic joint of Claim 46, wherein the liner member and the constraining ring are formed from a single member.

48. (Currently Amended) A prosthesis for replacement of an anatomical portion, comprising:

a first assembly comprising:

a bearing member sized to fit and replace a portion of an acetabulum including an internal concave portion defining an internal concave diameter;

a constraining ring member interconnected with the bearing member near an entrance to the internal concave portion to maintain an entrance dimension; and

a second member sized to fit and replace a portion of a femoral head having a first diameter substantially equal to said internal concave diameter and defining ~~at least a portion of an~~ a cylindrical equator defined around a first axis and extending completely around said second member;

wherein the cylindrical equator has ~~having~~ a second diameter less than said first diameter;

wherein said second member defines a connection depression formed around the first axis;

wherein said second member is adapted to be implanted into said internal concave portion during an operative procedure;

wherein said equator substantially eliminates complete contact of said second member with said first member.

49. (Previously Presented) The prosthesis of Claim 48, wherein the second member is operable to be positioned in the first assembly while in substantially only one orientation relative to the first assembly.

50. (Currently Amended) The prosthesis of Claim 49, wherein the one orientation includes when ~~an~~ the first axis ~~of the equator~~ is substantially aligned with an axis of the entrance.